

Application No. 09/86946  
Filing Date: June 25, 2001  
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**REMARKS**

Applicants have undertaken to amend claims 1-3, 5, 7-9, 11-14, cancel claims 16-17, and add new claims 18-28 in the above-identified application in order to remove improper multiple dependencies and conform to U.S. practice. No new matter has been added.

In addition, an Abstract has been added to the specification. A copy of the Abstract on a separate sheet is enclosed as well. Accordingly, entry hereof and examination on the merits are respectfully requested.

Respectfully submitted,



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**VERSION OF AMENDMENT WITH MARKINGS**  
**TO SHOW CHANGES MADE**

1. A product [**suitable**] for vaccinating an animal or a human to obtain therein an immune response against at least one antigen of a virus causing temporary, or long lasting immune impairment {comprising}[, wherein said product comprises] at least two different vaccine compositions for sequential administration to said animal or said human, each containing at least said antigen or a precursor thereof, wherein at least two of said vaccine compositions differ from each other by the presence therein of a different vector.

2. A product for vaccinating an animal or a human to obtain therein an immune response against an antigen {comprising}[, wherein said product comprises] at least two different vaccine compositions for sequential administration to said animal or said human, each containing at least said antigen or a precursor thereof, wherein at least two of said vaccine compositions differ from each other by the presence therein of a different vector.

3. A product according to claim 1 {for claim 2}, wherein at least part of{,} said vector or a product thereof, functions as an adjuvant.

5. A product according to {any one of claims 1-4} [claim 1], wherein at least one of said compositions comprises as an antigen precursor a nucleic acid encoding at least one proteinaceous molecule for inducing and/or boosting an immune response against said antigen.

7. A product according to {any one of claims 1-6} [claim 1], wherein said antigen is a part of or encoded by a virus, preferably a lentivirus or a hepatitis C virus.

8. A product according to {any one of claims 1-7} [claim 1], wherein said antigen comprises at least an immunogenic part, derivative and/or analogue of a lentivirus *gag*, *pol*, *rev*, *tat*, *nef*, or *env* protein or a combination thereof.

9. A product according to {any one of claims 5-8} [claim 1], wherein said vector comprises a nucleic acid which encodes at least one proteinaceous molecule capable of modulating an immune response.

11. A product according to {any one of claims 5-10} [claim 1], wherein said vector is a nucleic acid delivery vehicle comprising said nucleic acid.

12. A product according to {any one of claims 5-11} [claim 5], wherein said nucleic acid comprises nucleic acid of a Semliki Forest Virus, a poxvirus, a herpes virus and/or an adenovirus.

13. A product according to claim 11 {or claim 12}, wherein said nucleic acid delivery vehicle is a Semliki Forest Virus particle, a pox virus particle, a herpes virus particle or an adenovirus particle.

14. A method for vaccinating an animal to obtain therein an immune response against at least one antigen, comprising administering sequentially to said animal {,} at least two different vaccine compositions, {each containing} [wherein each vaccine composition comprises] at least said antigen or a precursor thereof {and}[,] wherein at least two of said vaccine compositions differ from each other by the presence therein of a different vector.

{16. Use of a vaccine composition comprising at least one antigen or a precursor thereof, and a vector, in a product according to any one of claims 1-13, or a method according to claim 14 or claim 15.}

{17. Use of an antigen, or a precursor thereof, for manufacturing a vaccine composition for vaccinating an animal or a human to obtain therein an immune response against said antigen, wherein said vaccine composition is administered sequentially with at least one other vaccine composition containing at least an immunogenic part, derivative and/or analogue of said antigen or antigen precursor, and a different vector.}

18. A method of producing an immune response to an antigen, or a precursor thereof, in an animal, comprising administering to said animal an antigen composition sequentially with at least one other antigen composition, wherein said other antigen composition comprises an immunogenic part, derivative and/or analogue of said antigen or antigen precursor and a different vector.

19. A product according to claim 2, wherein at least part of said vector or a product thereof, functions as an adjuvant.

20. A product according to claim 19, wherein said adjuvant function directs the immune response toward a more T helper 1 type or a more T helper 2 type of response or both.

21. A product according to claim 2, wherein at least one of said compositions comprises as an antigen precursor a nucleic acid encoding at least one proteinaceous molecule for inducing and/or boosting an immune response against said antigen.

22. A product according to claim 21, wherein said proteinaceous molecule comprises said antigen, or an immunogenic part, derivative or analogue thereof.

23. A product according to claim 2, wherein said antigen is a part of or encoded by a virus, preferably a lentivirus or a hepatitis C virus.

24. A product according to claim 2, wherein said antigen comprises at least an immunogenic part, derivative and/or analogue of a lentivirus *gag*, *pol*, *rev*, *tat*, *nef*, or *env* protein or a combination thereof.

25. A product according to claim 2, wherein said vector comprises a nucleic acid which encodes at least one proteinaceous molecule capable of modulating an immune response.

26. A product according to claim 2, wherein said vector is a nucleic acid delivery vehicle comprising said nucleic acid.

27. A product according to claim 21, wherein said nucleic acid comprises nucleic acid of a Semliki Forest Virus, a poxvirus, a herpes virus and/or an adenovirus.

28. A product according to claim 26, wherein said nucleic acid delivery vehicle is a Semliki Forest Virus particle, a pox virus particle, a herpes virus particle or an adenovirus particle.

18. A method of producing an immune response to an antigen, or a precursor thereof, in an animal, comprising administering to said animal an antigen composition sequentially with at least one other antigen composition, wherein said other antigen composition comprises an immunogenic part, derivative and/or analogue of said antigen or antigen precursor and a different vector.

19. A product according to claim 2, wherein at least part of said vector or a product thereof, functions as an adjuvant.

20. A product according to claim 19, wherein said adjuvant function directs the immune response toward a more T helper 1 type or a more T helper 2 type of response or both.

21. A product according to claim 2, wherein at least one of said compositions comprises as an antigen precursor a nucleic acid encoding at least one proteinaceous molecule for inducing and/or boosting an immune response against said antigen.

22. A product according to claim 21, wherein said proteinaceous molecule comprises said antigen, or an immunogenic part, derivative or analogue thereof.

23. A product according to claim 2, wherein said antigen is a part of or encoded by a virus, preferably a lentivirus or a hepatitis C virus.

24. A product according to claim 2, wherein said antigen comprises at least an immunogenic part, derivative and/or analogue of a lentivirus *gag*, *pol*, *rev*, *tat*, *nef*, or *env* protein or a combination thereof.

25. A product according to claim 2, wherein said vector comprises a nucleic acid which encodes at least one proteinaceous molecule capable of modulating an immune response.

26. A product according to claim 2, wherein said vector is a nucleic acid delivery vehicle comprising said nucleic acid.

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27. A product according to claim 21, wherein said nucleic acid comprises nucleic acid of a Semliki Forest Virus, a poxvirus, a herpes virus and/or an adenovirus.
28. A product according to claim 26, wherein said nucleic acid delivery vehicle is a Semliki Forest Virus particle, a pox virus particle, a herpes virus particle or an adenovirus particle.

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